

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of

Amendment of Section 2.106 of the
Commission's Rules to Allocate
Spectrum at 2 GHz for Use by the
Mobile-Satellite Service

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ET Docket No. 95-18

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

COMMENTS

**THE WIRELESS COMMUNICATIONS
ASSOCIATION INTERNATIONAL, INC.**

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EXECUTIVE SUMMARY

As the trade association of the fixed wireless broadband industry, WCA endorses the Commission's proposal to auction the 2110-2150 MHz band under rules that will permit flexible use. While a strong case can be made that the band should be set aside solely to meet the Nation's pressing need for ubiquitous high-speed wireless broadband services, the proposed flexible allocation will permit that use if, as WCA suspects, it is the use most valued by the marketplace.

WCA's support for the proposals advanced in the *Third NPRM* is subject to the adoption of rules that provide appropriate interference protection to adjacent channel Multipoint Distribution Service ("MDS") licensees in the 2150-2162 MHz band. MDS licensees have begun to aggressively deploy wireless broadband services, in addition to their more traditional video offerings, and should not be subjected to harmful interference resulting from the proposed radical changes to the manner in which the 2110-2150 MHz band will be used. Fortunately, the Commission has recently considered the issue of interference protection to MDS in MM Docket No. 97-217, and the rules and policies adopted there should serve as the model for assuring protection to MDS licensees from 2110-2150 MHz operations.

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COMMENTS

The Wireless Communications Association International, Inc. ("WCA"), acting pursuant to Section 1.415 of the Commission's Rules, hereby submits its initial comments in response to the *Third Notice of Proposed Rule Making* ("*Third NPRM*") in the above-captioned proceeding.^{1/} For the reasons set forth below, WCA strongly supports the proposed reallocation of the 2110-2150 MHz band as a vehicle for the provision of fixed broadband wireless services, subject to the adoption of rules that assure Multipoint Distribution Service ("MDS") licensees in the adjacent 2150-2162 MHz band protection against harmful interference.

I. INTRODUCTION AND STATEMENT OF INTEREST.

WCA is the principal trade association of the fixed wireless broadband communications industry. Its membership includes a wide variety of Commission licensees, wireless broadband telecommunications system operators, equipment manufacturers and consultants interested in the provision of fixed wireless broadband telecommunications services using spectrum at 2.1 GHz, 2.3 GHz, 2.5 GHz, 18 GHz, 24 GHz, 28 GHz, 31 GHz and 38 GHz allocated generally to the MDS, Wireless Communications Service ("WCS"), Instructional Television Fixed Service ("ITFS"), Digital Electronic Message Service ("DEMS"), Local Multipoint Distribution Service ("LMDS") and Private Operational Fixed Service ("OFS"). WCA's members are at the forefront of what the

^{1/} *Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service*, FCC 98-309 (rel. Nov. 25, 1998)[hereinafter cited as "*Third NPRM*"].

Commission has correctly identified as “the arrival of broadband communications services of the twenty-first century,”^{2/} and thus have a direct and substantial interest in this proceeding.

The *Third NPRM* proposes a reallocation of the 2110-2150 MHz band for fixed and mobile services and the licensing of that spectrum pursuant to competitive bidding. As will be discussed in more detail below, WCA wholeheartedly supports such a reallocation, as the 2110-2150 MHz band can serve as an effective vehicle for rapidly introducing high-speed broadband services into areas that today are unserved or underserved. WCA’s membership includes several MDS licensees that are already utilizing the adjacent 2150-2162 MHz band for high-speed Internet access and other similar services, and have demonstrated beyond doubt the viability of using of the 2 GHz band to provide fixed broadband wireless services. While WCA is not proposing that the Commission set aside the 2110-2150 MHz band solely for fixed wireless broadband services (although a strong argument can be crafted that the Commission should), it urges the Commission to assure that: (1) the rules and policies adopted in this proceeding do permit the use of the 2110-2150 MHz band for fixed wireless broadband services; and (2) those rules fully protect the continued ability of MDS and ITFS licensees in the adjacent 2150-2162 MHz band to deploy broadband services free of interference.^{3/}

^{2/} *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, CC Docket No. 98-146, FCC 98-187 at ¶ 1 (rel. Aug. 7, 1998) [hereinafter cited as “*Advanced Telecommunications NOR*”].

^{3/} As is discussed in more detail below, WCA is not proposing that licensees in the 2110-2150 MHz band be required to take extraordinary steps to protect Instructional Television Fixed Service (“ITFS”) licensees operating in the 2500-2690 MHz band from interference caused by overloading of downconverter front ends. Although MDS licensees in the 2150-2162 MHz band are currently subject to onerous requirements along these lines (*i.e.*, restrictions that mandate professional installation of all subscriber equipment, and 20 day advance notice to ITFS licensees before the activation of subscriber equipment), WCA and others have petitioned the Commission to reconsider its decision to so burden 2150-2162 MHz licensees. *See* Petition of Petitioners for Reconsideration, MM Docket No. 97-217, at 9-11 (filed Dec. 28, 1998) [hereinafter cited as “WCA MM Docket No. 97-217 Petition for Reconsideration”]. However, should the Commission decline to adopt the rule revisions proposed by WCA, then logic dictates that 2110-2150 MHz licensees be subject to the

II. DISCUSSION.

A. WCA Supports The Proposed Primary Flexible Allocation Of The 2110-2150 MHz Band To The Fixed Service and Mobile Service.

As is recognized by the *Third NPRM*, the 1997 Balanced Budget Act requires the Commission to reallocate the 40 MHz of spectrum at 2110-2150 MHz for assignment by competitive bidding unless the Commission determines that the reallocation and auction of some alternative 40 MHz of spectrum would better serve the public interest, convenience and necessity and that an auction of that alternative spectrum can reasonably be expected to produce greater receipts.^{4/} At the outset, WCA agrees with the Commission's conclusion, implicit in the *Third NPRM*, that there is no alternative 40 MHz of spectrum that satisfies the Congressional criteria. Indeed, because there is a pressing demand for spectrum capable of providing fixed broadband wireless services, because the propagation characteristics of the 2110-2150 MHz are quite favorable, and because the existing fixed point-to-point microwave licensees in that band apparently can be relocated to alternative spectrum,^{5/} WCA believes that even absent the mandate of the 1997 Balanced Budget Act, the

same requirements as 2150-2162 MHz MDS licensees relating to protection of 2500-2690 MHz operations..

^{4/} *Third NPRM*, at ¶ 7.

^{5/} Perhaps the most appropriate spectrum for relocation of the fixed point-to-point microwave licensees in the 2110-2150 MHz band is at 18 GHz. As the Commission considers the issues presented by the *Third NPRM*, it should recognize that in its *Notice of Proposed Rulemaking* in IB Docket No. 98-172, the Commission is proposing rule changes that will have the effect of substantially reducing the amount of spectrum at 18 GHz available for point-to-point links. See *Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use In the Matter of Redesignation of the 17.7-19.7 GHz Frequency Band*, IB Docket No. 98-172, FCC 98-235 (rel. Sept 18, 1998). WCA, the Fixed Wireless Communications Coalition and a variety of others have strenuously objected to the proposed reduction. See, e.g., Comments of Wireless Communications Association International, IB Docket No. 98-172, at 4 (filed Nov. 19, 1998); Comments of The Fixed Point-to-Point Communications Section, Wireless Communications Division of the Telecommunications Industry Association, IB Docket No. 98-172, App. A, at 2 (filed Nov. 19, 1998); Comments of SBC Communications, Inc., IB Docket No. 98-172, at 2 (filed Nov. 19, 1998); Comments of the Association for Maximum Service Television, Inc., IB Docket No. 98-172, at 2 (filed Nov. 19, 1998); Comments of AirTouch Communications, Inc., IB

reallocation of the 2110-2150 MHz band for fixed wireless broadband services as proposed by the *Third NPRM* would advance the public interest, convenience and necessity.

The need for increasing the bandwidth available to all Americans is patent. As was recognized in the Office of Plans and Policy Working Paper, *Digital Tornado: The Internet and Telecommunications Policy* ("Digital Tornado"):

The Internet is only useful to people if they are able to access it, and the value of the Internet is, to an increasing extent, dependent on the level of bandwidth available to end users. Thus, issues of service availability and affordability, especially with regard to services that provide higher bandwidth than analog POTS lines, will be central to the development of the Internet as a mass-market phenomenon that benefits all Americans.^{6/}

There is little question that fixed wireless broadband technology represents a cost-efficient, *near-term* solution to the "last mile" problem which has prevented widespread deployment of advanced telecommunications capability to all Americans.^{7/} As has been recognized in *Digital Tornado*, the *Advanced Telecommunications NOI* and elsewhere, wireless technology can be readily deployed to provide the high-capacity links that new service offerings demand, and can provide

Docket No. 98-172, at 3-4 (filed Nov. 19, 1998); Comments of WinStar Communications, Inc., IB Docket No. 98-172, at 2-3 (filed Nov. 19, 1998); Comments of GTE Service Corporation, IB Docket No. 98-172, at 4 (filed Nov. 19, 1998); Comments of RCN Telecom Services, Inc., IB Docket No. 98-172, at 2-3 (filed Nov. 19, 1998); Comments of the Cellular Telecommunications Industry Association, IB Docket No. 98-172, at 3 (filed Nov. 19, 1998); Comments of BP Communications Alaska, Inc., IB Docket No. 98-172, at 1-2 (filed Nov. 19, 1998); Comments of The Association of American Railroads, IB Docket No. 98-172, at 3-4 (filed Nov. 19, 1998); and Comments of The Boeing Company, IB Docket No. 98-172, at 1-2 (filed Nov. 19, 1998). Adoption of the proposal advanced in the *Third NPRM* will only exacerbate the demand for fixed terrestrial point-to-point microwave links at 18 GHz, militating against any wholesale reallocation of that band for satellite services in IB Docket No. 98-172.

^{6/} Werbach, *Digital Tornado: The Internet and Telecommunications Policy*, OPP Working Paper Series 29, at 73 (March 1997) [hereinafter cited as "*Digital Tornado*"].

^{7/} See, e.g., *Advanced Telecommunications NOI* at ¶ 19 ("The incumbent LECs possess wire facilities that go the last mile to nearly every home and business in the United States. The last part of these last miles generally consists of copper that, as now used, lacks advanced telecommunications capability.").

those links more quickly and at lower cost than wired competitors.^{8/} As the Commission develops its agenda for expediting the availability of advanced telecommunications capabilities to all Americans, the ability of point-to-multipoint wireless technologies to make service available throughout a community rapidly and in a cost-effective manner cannot be ignored.

The *Third NPRM* is precisely on point in observing that although the 2110-2150 MHz band is currently used for fixed point-to-point microwave operations:

[t]his spectrum could, however, be efficiently utilized for a number of services. For example, BAS operators could bid for spectrum in the band to operate additional analog or digital BAS channels. Commercial mobile service providers may wish to bid on this spectrum because of its proximity to PCS spectrum and favorable propagation characteristics for mobile use. Others may seek the spectrum for the provision of fixed wireless access telephone service. Potential providers of International Mobile Telecommunication - 2000 (IMT-2000), a service conceived to provide integrated global mobile communications, may wish to bid for the spectrum.^{2/}

WCA appreciates that notwithstanding WCA's belief that the highest and best usage of the 2110-2150 MHz band is for fixed wireless broadband services, others may highly value the 2110-2150 MHz band for some of the other potential applications identified by the Commission. Thus, WCA endorses the Commission's proposal to reallocate the 2110-2150 MHz band for co-primary fixed and mobile service use. Adopting such a broad allocation would be consistent with the twin tenets

^{8/} See *Digital Tornado*, at 74-75; *Advanced Telecommunications NOI* at ¶¶ 42-44; *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service And Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, 12 FCC Rcd 22174, 22175-78 (1997); *Amendment of Parts 1, 21, and 25 of the Commission's Rules To Redesignate The 27.5 - 29.5 GHz Frequency Band, To Reallocate the 29.5 - 30.0 GHz Frequency Band, To Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, 12 FCC Rcd 12545, 12552 (1997); *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993 - Annual Report and Analysis of Competitive Market - Conditions With Respect to Commercial Mobile Services*, FCC 98-91, Appendix F at F-1 (rel. June 11, 1998) (the "*Third Annual CMRS Competition Report*"); *id.* at F-12; Beaver, "Study: Wireless Best Platform For High-speed Internet Access," *Wireless Week*, 16 (Jan. 18, 1999); Schofield, "Third Rail Wireless Becomes First MMDS Based CLEC," *Wireless Voice Video Data*, at 14 (May/June, 1998); Britton, "The Broadband Wireless Revolution," *Private Cable & Wireless Cable*, at 37 (June, 1998).

^{2/} *Third NPRM* at ¶ 30.

of Commission policy favoring approaches to spectrum usage that maximize flexibility and promote market-driven results.

As a general proposition, it is beyond peradventure that affording licensees flexibility in spectrum use is in the public interest. As former Chairman Hundt noted when he testified before the House Subcommittee on Telecommunications, Trade and Consumer Protection:

We study history so as not to repeat its failures. Spectrum policy, unfortunately, teaches us many lessons. One important lesson is that static definitions of use, whether for service or technology, are doomed to fail and will need to be changed. In nearly every service the FCC authorizes, licensees come back to the Commission to ask permission to change something. This is not ancient history, but is occurring even now, as the old regime continues its sway over Commission thinking. . . We must reject the 1945 principles that would administratively evaluate the relative costs of wireless and wireline provision of these services. Rather, we need to allow licensees the flexibility to provide the high speed, high quality services that consumers demand.^{10/}

Similarly, Gregory L. Rosston and Jeffrey Steinberg established in their seminal work on flexible use that the Commission should be affording all licensees the ability to employ their spectrum flexibly, and should not deny any one group of licensees flexible use rules in order to benefit some other group of licensees.^{11/} That philosophy has governed virtually all Commission spectrum utilization determinations since, and should apply here.^{12/}

The Commission is authorized to allocate spectrum in a manner that permits flexible use where such use is consistent with international agreements to which the United States is a party and

^{10/} Statement of Reed E. Hundt on Spectrum Management Policy before the Subcommittee on Telecommunications, Trade and Consumer Protection, Committee on Commerce, U.S. House of Representatives at 11-12 (Feb. 12, 1997).

^{11/} Rosston and Steinberg, "Using Market-Based Spectrum Policy to Promote the Public Interest," *F. Comm. L. J.* 87, 100 (Dec. 1997).

^{12/} See, e.g., *Amendment of Part 95 of the Commission's Rules To Allow Interactive Video and Data Service Licenses To Provide Mobile Service To Subscribers*, 10 FCC Rcd 4981, 4982 (1995) (affording IVDS licensees flexible use); *Amendment of the Commission's Rules To Permit Flexible Service Offerings in the Commercial Mobile Radio Services*, 11 FCC Rcd 8965, 8973-77 (1996); *Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands*, 12 FCC Rcd 18,600, 18,612-17 (1997)[hereinafter cited as "39 GHz Report and Order"].

the Commission finds that: (1) such an allocation would be in the public interest; (2) such use would not deter investment in communications services and systems, or technical development; and (3) such use would not result in harmful interference among users.^{13/} These requirements would all be satisfied by allocating the 2110-2150 MHz band as proposed in the *Third NPRM*. Permitting flexible use of the 2110-2150 MHz band will stimulate creative technology development and facilitate investment therein.^{14/} It will also allow licensees flexibility in the design of their systems, permitting them to respond readily to consumer demand and allowing the marketplace to dictate the best uses of this band.^{15/} And, with the adoption of appropriate interference protection rules such as those discussed below, flexible use need not result in harmful interference among users.

Because of the recognized benefits of flexible use, WCA must take issue with the proposal advanced in a Petition for Rule Making filed by the Wireless Communications Division of the Telecommunications Industry Association (the "TIA Petition") advocating the "designation" of the 2110-2150 MHz band *solely* for so-called "third generation" services and the limitation on eligibility for the 2110-2150 MHz band to existing cellular and PCS operators.^{16/} Again, it must be stressed that while WCA does not oppose the utilization of the 2110-2150 MHz band for IMT-2000 type services, the Commission itself has properly recognized that use of this band for other applications

^{13/} 47 U.S.C. §303(y), as amended by the Balanced Budget Act of 1997, P.L. No. 105-33, §3005, 111 Stat. 251 (1997).

^{14/} See *39 GHz Report and Order*, 12 FCC Rcd at 18,616.

^{15/} See *id.*

^{16/} See Petition of Wireless Communications Division of the Telecommunications Industry Ass'n, ET Docket No. 95-18 (filed Oct. 20, 1998)[hereinafter cited as "TIA Petition"]. The Commission noted the filing of the TIA Petition in the *Third NPRM*, and indicated that it would "address this petition separately." *Third NPRM*, at n. 64. Given the obvious linkage between the issues raised in the *Third NPRM* and the TIA Petition, WCA is briefly raising its concerns with the TIA Petition here, but reserves its right to comment more fully upon the TIA Petition if the Commission seeks separate comment upon it or if the positions advocated in the TIA Petition are advanced again in response to the *Third NPRM*.

is equally in the public interest.^{17/} While adoption of the TIA proposal would no doubt benefit existing PCS and cellular operators, adoption of the proposal advanced in the *Third NPRM* will best benefit the public.

The arbitrary limitations on the use of and eligibility for the 2110-2150 MHz band proposed in the TIA Petition is both unnecessary and unduly restrictive. At a time when the Commission is aggressively seeking to expand the availability of broadband video, voice and data services to all Americans, it would be inexplicable for the Commission to artificially set aside the 2110-2150 MHz band solely for a small group of mobile service providers. Chairman Kennard's just-announced Commission agenda for 1999 has among its goals to "[p]romote the development and deployment of high-speed Internet connections to all Americans" and to "[c]lear regulatory hurdles so that innovations, and markets for them, can flourish."^{18/} Granting the TIA Petition and restricting the 2110-2150 MHz band solely for existing PCS and cellular licensees providing one type of service would run counter to those goals.

TIA clouds the issue in its Petition by suggesting that the ITU's having "allocated" the 2110-2150 MHz band, *inter alia*, for Future Public Land Mobile Telecommunications Services (the predecessor name for IMT-2000 services) is relevant.^{19/} That ITU action does not mean that the Commission must set aside the 2110-2150 MHz band as proposed by TIA. As the Commission correctly noted in the *Third NPRM*, International Footnote S5.388 (*Radio Regulations* No. 746A), added to the ITU *Radio Regulations* by the 1992 World Radiocommunications Conference and applied to the international allocations in the 2110-2150 MHz band, states that while the bands are "intended for use" for FPLMTS/IMT-2000, such use "does not preclude the use of these bands by

^{17/} See *Third NPRM* at ¶ 30 (providing examples of various services, including IMT-2000, which might utilize the 2110-2150 MHz band).

^{18/} See "Chairman Kennard's Agenda for the FCC for 1999" (rel. Jan. 7, 1999).

^{19/} TIA Petition at 3.

other services to which these bands are allocated”^{20/}

TIA argues in favor of limiting the use of the 2110-2150 MHz band and eligibility for licenses in that band essentially for two reasons. First, TIA asserts that the bandwidth demands of IMT-2000 “third generation” mobile services will require the “augmentation” of the spectrum currently available for cellular and PCS forward links because of the larger data flows that are anticipated.^{21/} Second, TIA argues that the availability of the 2110-2150 MHz band for those forward links for IMT-2000 would “vastly improve” the misalignment of IMT-2000 spectrum worldwide.^{22/} Neither of these arguments bears up to close scrutiny.

While WCA does not object to the potential use of the 2110-2150 MHz band for mobile applications, the assertion by TIA that the entire band must be exclusively used to address the bandwidth needs of “third generation” mobile services is not supportable. Indeed, the very chart presented by TIA to demonstrate the need for the 2110-2150 MHz band shows that the Japanese, Koreans and Europeans have all identified approximately 120 MHz in two 60 MHz bands as appropriate for IMT-2000.^{23/} This is precisely the amount of spectrum already allocated for PCS in the United States (1850-1910 and 1930-1990 MHz). It would seem, then, that the rest of the governments around the world believe the demands of IMT-2000 to be adequately satisfied within two 60 MHz blocks, and that the additional large forward link sought by TIA for the United States is unnecessary.

TIA’s spectrum alignment argument is equally flawed. If the entire 40 MHz between 2110 and 2150 MHz were to be used exclusively to augment existing PCS and cellular services as requested by TIA, then the only resulting international alignment of third generation mobile

^{20/} *Third NPRM* at n. 63.

^{21/} *See* TIA Petition at 7.

^{22/} *See id.* at 4, 7-8.

^{23/} *See id.* at 4.

spectrum would be between this 40 MHz of “augmentation” forward link spectrum and a portion of the 2110-2170 MHz identified for forward link use by other countries. Significantly, the existing mobile forward link bands, and in particular the 1930-1990 MHz PCS forward link band, would not be aligned with the 2110-2170 MHz band, nor would the existing 1850-1910 MHz PCS reverse link band (or current cellular reverse link band) be aligned with the 1920-1980 IMT-2000 reverse links identified by other countries. In fact, the existing PCS forward link band would be almost completely aligned with the *reverse* links in other nations. And, of course, there would be no alignment of the cellular bands. Any improvement in alignment with other countries resulting from the TIA plan is so marginal as to be decisionally insignificant. It just is not accurate for TIA to assert that the exclusive use of the 2110-2150 MHz band for broadband PCS would “vastly improve” the alignment problem. On the contrary, even assuming a grant of the TIA proposal, significant misalignment issues — especially equipment dual-mode and roaming limitation issues — would remain.

In sum, WCA agrees with the Commission that the 2110-2150 MHz band should be allocated for co-primary fixed and mobile services, without limiting the band to any particular types of services falling within these broad allocation categories.

B. The Commission Should Channelize The 2110-2150 MHz Band Into Four 10 MHz Channels And Issue Licenses On A BTA Basis Through A Simultaneous Multiround Auction.

Although not addressed in the *Third NPRM*, WCA believes that the success of the 2110-2150 MHz band, as with any flexible use allocation, will depend upon the development of licensing rules that reasonably accommodate all prospective users. Therefore, WCA proposes that the Commission license the 2110-2150 MHz band using a simultaneous, multiround auction of spectrum blocks and geographic areas tailored to the most likely uses of the band, while affording each license the flexibility to engage in partitioning and disaggregation to better hone its authorizations to marketplace demand for its services.

WCA proposes that the Commission utilize Basic Trading Areas ("BTAs") as the geographic service areas pursuant to which 2110-2150 MHz band licenses will be issued. The Commission's rationale for its recent decision to use BTAs for the licensing of the 39 GHz band is illustrative of why BTAs should be used here:

In choosing the most appropriate definition for 39 GHz service areas, we observe that our conclusion that this band is auctionable . . . requires us to apply the criteria of Section 309(j)(4)(C) of the Communications Act of 1934, as amended, ("Act" or "Communications Act"). This Section mandates that we consider certain factors when establishing service areas for auctionable services. The first of these criteria is that the service area promote an equitable distribution of licenses and services among geographic areas. We believe that use of BTAs fulfills this objective because they are intended to represent the natural flow of commerce, comprising areas within which consumers have a community of interest. As a result, we believe that BTAs are representative of the geographic areas in which the types of services envisioned for the 39 GHz band are likely to be provided. The second criterion we are required to consider is whether the service area is appropriate to provide economic opportunity for a wide variety of applicants, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women. We believe that BTAs are sufficiently large to accommodate the array of services proposed for the 39 GHz band in a manner which provides opportunities for a variety of licensees. For example, broadband PCS licensees use BTAs or Major Trading Areas ("MTAs," which are regional aggregations of BTAs), as their primary service areas, and may seek to use 39 GHz band spectrum for backbone and backhaul. Thus, the BTA-sized service areas for support spectrum will be compatible with the primary service areas defined for broadband PCS providers. We also believe that other services, such as telephony, would find sufficient population within BTAs to support the pursuit of various business opportunities. In addition, we believe that other services anticipated for 39 GHz spectrum, such as wireless local loop, competitive access, local exchange, and Internet access, are of a local nature for which use of BTAs also would be appropriate. Moreover, we believe that use of BTAs as the service area definition for the 39 GHz band will also satisfy the third criterion of Section 309(j)(4)(C), which requires that we establish service areas in a manner which will promote investment in and rapid deployment of new technologies and services.^{24/}

The very same considerations are applicable here. There is a clear demand for the 2110-2150 MHz band by MDS licensees, particularly those needing to expand the quantity of spectrum

^{24/} 39 GHz Report and Order; 12 FCC Rcd at 18,610-11

available for return paths from subscriber locations, and BTAs are already used to license MDS.^{25/} In addition, the TIA Petition reflects an apparent demand for the band by the PCS industry, which also uses BTAs as the basic geographic licensing area.^{26/} Thus, just as BTAs were selected for the 39 GHz band to promote compatibility with the service areas of likely users^{27/}, so too should BTAs be selected here. Moreover, since the Commission has utilized BTAs to license the upper adjacent MDS channels, use here of the same geographic areas will simplify the coordination of adjacent channel usage by MDS and 2110-2150 MHz band licensees.

Of course, BTA-based service areas may not be appropriate for all applications of the band. The use of a simultaneous multi-round auction will promote the ability of participants to aggregate contiguous geographic service areas where desired,^{28/} while partitioning will allow auction winners to ultimately adjust the size of their authorized geographic service areas to marketplace demand.^{29/}

Although WCA remains open to the possibility that other channelization plans may be appropriate, WCA tentatively proposes that the Commission channelize the 2110-2150 MHz band into four channels, each consisting of a contiguous 10 MHz band. This should provide sufficient spectrum for most of the likely uses of the band identified by the Commission. So long as bidders can aggregate multiple 10 MHz spectrum blocks within a given geographic area and disaggregate spectrum where 10 MHz is more than needed, a channelization plan based on 10 MHz channels should maximize efficient use of the spectrum by permitting each service provider to secure just the

^{25/} See 47 C.F.R. §21.924.

^{26/} See 47 C.F.R. §§ 24.102 (narrowband PCS) and 24.202 (broadband PCS).

^{27/} See 39 GHz Report and Order, 12 FCC Rcd at 18,611.

^{28/} See *Implementation of Section 309(j) of the Communications Act — Competitive Bidding*, 9 FCC Rcd 2348, 2366-67 (1994).

^{29/} See *Geographic Partitioning and Spectrum Disaggregation By Commercial Mobile Radio Services Licensees and Implementation of Section 257 of the Communications Act: Elimination of Market Entry Barriers*, 11 FCC Rcd 21831 (1996).

amount of spectrum it requires.^{30/}

C. The Commission Must Adopt Interference Protection Rules That Assure Interference Protection To 2110-2150 MHz Licensees And To MDS Licensees In The 2150-2162 MHz Band.

In proposing the broad availability of the 2110-2150 MHz band for fixed and mobile services, the *Third NPRM* discussed at great length the potential for interference with already-authorized BAS and microwave stations.^{31/} When authorizing any service on the 2110-2150 MHz band, however, the Commission must also assure that the current allocation of the 2150-2162 MHz band to MDS licensees for video, voice and data services is not jeopardized. Fortunately, the Commission has just recently revisited the interference protection rules applicable to MDS use of the 2150-2162 MHz band when it adopted its September 25, 1998 *Report and Order* in MM Docket No. 97-217, and those new rules can be readily applied to protect MDS operations not just from each other, but also from 2110-2150 MHz band operations.

First, to avoid interference from the 2110-2150 MHz band to MDS operations, the Commission must adopt a spectral mask which adequately restricts out-of-band emissions from the 2110-2150 MHz band into the adjacent MDS allocation. WCA urges that the Commission require that 2110-2150 MHz band licensees with an upper edge at 2150 MHz be required to comply with the spectral mask set forth in Section 21.908(a) of the Commission's Rules, as recently amended by the *Report and Order* in MM Docket No. 97-217.^{32/} In that proceeding, the Commission carefully considered the spectral mask necessary to protect MDS operations, and adopted detailed new out-of-

^{30/} See *In the Matter of the Commission's Rules to Establish New Personal Communications Services*, 8 FCC Rcd 7700, 7726-29 (1993); *In the Matter of the Commission's Rules to Establish New Personal Communications Services*, 9 FCC Rcd 4957, 4980-82 (1994).

^{31/} See *Third NPRM* at ¶¶ 31-51.

^{32/} Of course, the Commission will also need to adopt spectral masks to restrict out-of-band emissions at the edges of any channels created out of the 2110-2150 MHz band, and WCA looks forward to reviewing whatever specific recommendations are response to the *Third NPRM*.

band emission rules which accomplish that goal.^{33/} WCA can think of no valid reason for the Commission to revisit those new rules here.

While adoption of an appropriate spectral mask will reduce the prospects for adjacent channel interference to MDS operations, it will not eliminate it.^{34/} Therefore, WCA suggests that any 2110-2150 MHz licensee who operates in the 10 MHz channel adjacent to the 2150-2162 MHz band be required to provide the licensee of the MDS channel at 2150-2156 with the same adjacent channel protection that licensee is entitled to under the MDS rules — the 0 dB desired-to-undesired signal ratio for downstream operations pursuant to Section 21.902 of the Commission's rules and/or the protection afforded by newly-adopted Section 21.909(i) for upstream transmissions.^{35/}

Third, although not raised by the *Third NPRM*, it is essential that the Commission impose some limitation on the EIRP of 2110-2150 MHz transmissions, not just to protect the 2150-2162 MHz band, but to promote interference-free operations on adjacent channels within the 2110-2150 MHz band. The new WCS and MDS rules provide an appropriate model — they limit fixed stations

^{33/} See *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service And Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions*, FCC 98-231, MM Docket No. 97-217, at ¶¶ 26-32 (rel. Sept. 25, 1998) [hereinafter cited as "*MDS/ITFS Two-Way Report and Order*"].

^{34/} See *id.*, at ¶¶ 22-25, 39.

^{35/} Although WCA is asking the Commission to require 2110-2150 MHz licensees to afford MDS licensees in the 2150-2156 MHz band the adjacent channel interference protection they are entitled to from other MDS licensees, WCA is not suggesting that 2110-2150 MHz licensees be required to submit applications for new facilities and await Commission approval of those applications in the same manner as MDS licensees must. However, WCA does suggest that the Commission require all 2110-2150 MHz licensees to provide 30 days advance notice to every 2150-2162 MHz MDS licensee with a protected service area overlapping the 2110-2150 MHz licensee's geographic service area prior to activating any transmission facility. The only exception should be that no notice should be required of the activation of individual subscriber units (whether fixed or mobile) that communication with a point-to-multipoint facility for which notice is given. That notice should contain a description of the location of the facility, the ground elevation, the height AGL of the radiators, the EIRP along every azimuth, the emission designator, polarization and the frequencies that will be used. This notice requirement, coupled with a mandate that 2110-2150 MHz licensees assist in good faith in investigating interference and bear the expense of curing harmful adjacent channel interference they cause, should be sufficient to adequately protect MDS licensees.

to 2,000 watts peak EIRP^{36/} and mobile stations to 20 watts EIRP.^{37/} Adoption of similar restrictions here, combined with the other prophylactic rules being proposed by WCA, will substantially reduce the potential for adjacent channel interference without unduly restricting the ability of licensees to make productive use of their spectrum.

Finally, the Commission must impose on 2110-2150 MHz licensees obligations similar to those imposed on others to protect MDS operations from interference due to block downconverter overload. The problem, in a nutshell, is that under some circumstances high-power transmitters operating over spectrum close to the 2150-2162 MHz band could overload the front end of those downconverters that are in close proximity to the transmitter. This potential problem is hardly new; the Commission addressed it both when it created the WCS^{38/} and, more recently, when it amended its rules to permit MDS and ITFS licensees to utilize their spectrum with greater flexibility.^{39/}

Although at first blush it would appear logical to apply to the 2110-2150 MHz band the same approach recently adopted in the *MDS/ITFS Two-Way Report and Order*, WCA cannot recommend that the Commission do so *en toto*. Certainly, there are elements of those new rules that are appropriate and should apply to licensees in the 2110-2150 MHz band — particularly the requirement of newly-adopted Section 21.909(g)(8) that any newcomer cure any interference due to block downconverter overload to previously-proposed or licensed MDS or ITFS facilities. Quite frankly, however, the rules and policies adopted by the Commission in the *MDS/ITFS Two-Way Report and Order* also include provisions so unnecessarily burdensome that they threaten the viability of MDS spectrum for fixed wireless broadband applications. Under those rules, MDS

^{36/} See 47 C.F.R. §§ 21.904(a) (MDS transmitter power); 27.50 (a) (WCS transmitter power).

^{37/} 47 C.F.R. §27.50 (b). See *WCS Reconsideration Order*, 12 FCC Rcd at 3983-84. The MDS rules do not permit the operation of mobile transmitters, and thus there is no analogous provision.

^{38/} See *WCS Report and Order*, 12 FCC Rcd at 10862-64; *WCS Reconsideration Order*, 12 FCC Rcd at 3979-86.

^{39/} See *MDS/ITFS Two-Way Report and Order*, at ¶¶ 39-56.

subscriber equipment must be professionally installed, and the licensees of ITFS receive sites must be given 20 days advance notice before a subscriber unit can be activated nearby. Not surprisingly, WCA (as part of an industry coalition of over 110 licensees, system operators, vendors and consultants) has petitioned the Commission to substantially revise those rules to eliminate those excessive requirements.^{40/} Several others have filed petitions proposing similar modifications to the Commission's rules.^{41/}

From WCA's perspective, licensees in the 2110-2150 MHz band should be subjected to precisely the same obligations regarding block downconverter overload as licensees of the adjacent 2150-2162 MHz MDS band. Thus, WCA would urge the Commission to carefully coordinate its consideration of this proceeding with its approach to the reconsideration petitions pending in MM Docket No. 97-217. While WCA hopes the Commission in MM Docket No. 97-217 will retain the basic obligation to cure interference due to block downconverter overload, but eliminate the overly burdensome restrictions on the activation of subscriber units, fundamental fairness demands that licensees at 2110-2150 MHz abide by the same restrictions as MDS licenses at 2150-2162 MHz.

III. CONCLUSION.

For the reasons set forth above, WCA strongly supports the proposed reallocation of the

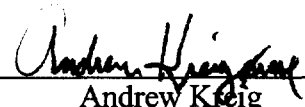
^{40/} See WCA MM Docket No. 97-217 Petition for Reconsideration, at 3-16.

^{41/} See Petition for Reconsideration of QUALCOMM, Inc., MM Docket 97-217, at 7-19 (filed Dec. 28, 1998); Petition for Reconsideration of The San Francisco-San Jose Educator/Operator Consortium, MM Docket 97-217, at 6-8 (filed Dec. 28, 1998); Petition for Reconsideration of Region IV Education Service Center, *et al.*, MM Docket 97-217, at 6-8 (filed Dec. 28, 1998).

2110-2150 MHz band as a vehicle for the provision of fixed broadband wireless services, subject to the adoption of rules that assure MDS licensees in the adjacent 2150-2162 MHz band protection against harmful interference.

Respectfully submitted,

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